



Seeking job: Data scientist, R&D engineer

Mahmoud BENTRIOU, Ph.D

[website](#) [LinkedIn](#) [google scholar](#)

SUMMARY

I graduated with a PhD and an engineering degree and finished a post-doc position. My career is motivated by the interactions between my two scientific interests, mathematics and computer science, while keeping applied use cases.

SKILLS

- Machine learning / Deep learning
- Statistics, Time series
- Data mining
- Software development
- Clinical and biological data analysis
- Systems biology

IT

- **Languages:** Julia, Python, R, C, SQL
- **Packages:** scikit-learn, pytorch, PySpark, Snakemake, Django, Plotly/Dash
- **Environment:** Git, Unix, CI

LANGUAGES

- **English:** professional
- **Spanish:** beginner

SOFT SKILLS

- Professional
- Critical thinking
- Emotional intelligence

HOBBIES

- Musics (drums, guitar)
- Martial arts (karate, thai boxing)

CONTACT

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Based in Paris
Driver license



WORK EXPERIENCE

Post-doc at Institut Gustave Roussy and CentraleSupélec

CESP (Inserm) and MICS laboratory | May 2021 - Nov. 2023

Risk estimation of cardiac diseases induced by radiotherapy among childhood cancer survivors.

Activities:

- Statistical analysis (epidemiology, inference) of the radio-induced risk among childhood cancer survivors for the occurrence of cardiac diseases or breast cancer ;
- Research articles publishing ;
- Student projects management (creation of the study topics, supervision).

Acquired skills:

- Management of a large medical database (7670 patients) ;
- Survival analysis (Cox models, machine learning) ;
- Image processing techniques (radiomics, convolutional neural networks) ;
- Robust pipeline organization of the analyzes (Snakemake) ;
- Joint work with epidemiologists, nuclear physicists and pediatricians ;
- IT: Python, R, pytorch, scikit-learn, Snakemake, Git.



CentraleSupélec

PhD candidate at CentraleSupélec - Université Paris-Saclay

MICS laboratory | Sept. 2017- April 2021

Thesis title: "Statistical inference and verification for biochemical networks."

Topic between advanced bayesian statistical methods and theoretical computer science applied to Systems biology.

Activities:

- Writing a research thesis in English ;
- Teaching: tutorial work and lab work, student project management ;
- Organizing the team seminar ;
- Attendance and communication at international conferences ;
- Publishing research articles ;
- IT: Julia, Python, R, high performance computing cluster, Git.

Acquired skills:

- High performance numerical simulations, algorithmic innovation ;
- Markovian models and inference, model-checking ;
- Scientific analysis and rigour ;
- Autonomous work organization for a long-term research project ;
- Communication within different scientific fields ;
- Make a technological watch and a state-of-the-art report ;
- Reading and writing scientific articles.

Research engineer at CentraleSupélec

MICS laboratory | March 2017 - Sept. 2017

Machine learning methods development on gene expression data of renal carcinoma patients (TCGA) for immunology.

This work has led to a research article being published.

Activities:

- Statistical analysis (differential, inference) over transcriptomic data (RNAseq) ;
- Publishing a research article.

Acquired skills:

- Joint work with biologists ;
- Expertise in the study of transcriptomic data.

End-of-course internship

Atos (formerly FastConnect) | March 2016 - Sept. 2016

R&D data science internship. Failure detection over real ticketing data.

Acquired skills:

Statistical inference applied on real data (regression, time series).

Second-year internship

Thalès DIS (formerly Gemalto) | June 2015 - Sept. 2015

IT security within a european R&D project.

Design and development in Python of security techniques for Android apps.

EDUCATION



CentraleSupélec

PhD in applied mathematics

CentraleSupélec - Université Paris-Saclay | December 2021

Thèse de doctorat : "Statistical inference and verification for biochemical networks."

Engineering Degree

Grenoble INP - Ensimag | Sept. 2013 - Sept. 2016

Mathematical modeling, Image, Simulation second-year track.

Data science track in the MSIAM master.

Class preparatory school to the French Grandes Ecoles

Lycée Lakanal, Lycée Marceau | Sept. 2010 - Sept. 2013

Mathematics and Physics (MP)

